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ABSTRACT

This study examined the effects of differentially characterizing a model as "good", "bad", or "neutral" on preschool children's subsequent evaluation and imitation of the model. The model's aggressive and motor behaviors were more frequently imitated than were his non-aggressive and verbal behaviors. Instructions influenced the Ss' evaluation of the model's behavior only in the "good" condition; in this condition, Ss engaged in more imitative motor aggression. Contrary to expectation, the imitative responses of Ss in the "bad" model group were not less frequent than those of the "neutral" model group. (SBT)

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ABSTRACT

The effects of differentially characterizing a model as "good", "bad" or "neutral" on preschool children's subsequent evaluation of the model and their imitation of model's motor and verbal, aggressive and nonaggressive responses were examined. In general, the model's aggressive and motor behaviors were more frequently imitated by Ss than his nonaggressive and verbal behaviors. While instructions had the expected influence on Ss' stated evaluation of the model, a positive relationship between Ss' evaluation of the model and their imitative behavior was found only within the "good" model condition. As anticipated, Ss in the "good" model group engaged in imitative motor aggression more frequently than Ss in the "bad" and "neutral" model groups. Contrary to expectation, the imitative responses of Ss in the "bad" model group were not less frequent that those of the "neutral" model Ss.

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Effects of Model Characterization on Preschool Children's Evaluative, Imitative and Nonimitative Responses

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Since the advent of national television, it has been suggested that the observed increment of aggression, delinquency and crime in society is due to the emphasis on violence in television programming. Research supporting this position has been conducted by Eron (1963) who noted a significant positive correlation between violence ratings of preferred television programs, as reported by parents, and aggressive behavior of third grade boys, as rated by peers in school. More recently, Eron, Huesmann, Lefkowitz and Walder (1972) in a ten year follow-up study found that the violence ratings of television shows preferred by subjects while in the third grade, were still significantly correlated with peer ratings of their aggressiveness at age nineteen. The effects of television on aggressive behaviors have also been studied in the laboratory. For example, Steuer, Applefield, and Smith (1971) rated aggressive behavior of preschool children before and after they were shown ten minute segments of violent or nonviolent television programs. Those Ss who saw the aggressive segments significantly increased in interpersonal aggression over their original baseline levels.

Within the child development literature, attention has been generally devoted to an analysis of observational

learning and the variables affecting its development. Multiple studies have suggested that characteristic of the observers (such as degree of self-esteem, competence, dependence and level of arousal) can influence the extent to which imitative responses occur (Gelfand, 1962; Kanareff and Lanzetta, 1960; Jakubszak and Walters, 1959; and Walters, Marshall and Shooter, 1960). Likewise, model characteristics have also been found to extensively effect the probability of matching responses occurring. For example, models who are nurturant, prestigeful and who have control over rewarding sources have been found to be more readily imitated than models without these qualities (Jakubczak and Walters, 1959; Bandura and Huston, 1961; Gelfand, 1962). Moreover, results by Bandura, Ross and Ross (1961) suggested that the sex of the model is an important factor determining the extent of aggressive imitation. Since these studies often have involved filmed models presented via "television", they directly relate to the issue of television's influence upon children's behavior. In general, this research suggests that television models can exert substantial influence on the observing child's behavior.

If the negative influences of certain television programs on children's behavior are accepted, the frequency of occurrence of undesirable behavior can probably be reduced by censoring out "dangerous" television in the home environment or by imposing standards upon the television industry. However a less radical solution to this problem

is suggested by Bandura, Ross and Ross's (1963) study. These authors questioned Ss' parents and found that one means parents had used to discourage children's imitation of television aggression was by labeling the behavior modeled in a disapproving manner. Although the effects of verbally evaluating model's responses have not been directly examined, DeRath (1964) did find that imitative behavior of children could be virtually eliminated by administering prohibitive verbal instructions regarding specific aggressive acts.

The influence of evaluative statements concerning the model rather than his behavior has, however, been examined. Liebert, Fernandez, and Gill (1969) researched the effect of verbally ascribing the characteristic of "friendlessness" to a film mediated model upon children's acquisition and imitation of the model's choice preferences. Despite the fact that such a verbal ascription did not influence imitation in this study, the way a model is characterized remains a potentially important variable affecting and for influencing the imitative process and it needs to be more fully examined. That is, the characterization of a model as well as the actual characteristics of the model (e.g., his sex and warmth) may be potent factors affecting observer imitation.

In the present study, model characterization was examined as a possible factor affecting imitative behavior.

For different groups of Ss, the model was variously characterized in a "good", "bad" or "neutral, nonevaluative" fashion. In contrast to most other modeling research, the model in this study displayed both aggressive and nonaggressive behaviors, thus allowing for the possibility of selective imitation by the children. It was predicted that a positive model evaluation would facilitate imitation while negative statements about the model would inhibit imitation.

METHOD

Subjects

The Ss, 33 males and 24 females, were enrolled in a nursery school in South Bend, Indiana. Children ranged in age from 39 to 80 months ($\bar{X}$ = 54.68).

One adult, a male undergraduate psychology student at the University of Notre Dame, served in the role of model. One female E conducted the study for all 57 children.

Materials and Apparatus

For the purposes of this study, a videotape record of the model's behavior was produced. The videotape was presented to the child via a Panasonic tape recorder and monitor. For approximately nine minutes, the model performed three times in succession the following fixed sequence of aggressive and nonaggressive acts: Places broom between legs and rides it as if it were a horse, aims gun at a Popeye doll (similar to Bandura's Bobo doll), uses wooden mallet to hammer Popeye doll, places Indian headdress

on head and dances, kicks Popeye doll five times, and marches around room in distinctive and stereotyped "soldier - like" fashion. These acts are listed in the order that they actually occurred on the videotape. Accompanying this sequence of acts were the following respective verbalizations: "Giddy-up horsie", "bang-bang", "wham", "woo-woo", "take that" and "march-march".

Design and Procedure

Subjects were assigned into three instructional groups, two of which were experimental groups and a third which served as a control group. One group of experimental Ss was told by the E that the model was a "bad" boy while Ss in another group were told that the model was a "good" boy. A third group of Ss serving as controls was given a nonevaluative description of the model. The three groups, counterbalanced for age of Ss, had approximately the same ratio of male to female Ss (See table 1).

The E met each S within the setting of the usual pre-school curricula. Ss were then brought individually into an experimental trailer. The trailer had two large rooms, with an additional small observation room with one-way mirrors located in between them. The S was initially seated in front of the television monitor located in one of the larger rooms. Depending upon his assigned model characterization group, he was presented one of the following descriptions of the model:

Good - "The man you are going to see now is Scott. Scott is a very nice man. He lives in a big white house and has a brother and a sister just about your age. Scott is a good brother, he likes to play, and is never a naughty boy. He always does nice things for his brother and sister and they like him very much. They say Scott is the best brother in the world."

Bad - "The man you are going to see now is Scott. Scott is not a very nice man. He lives in a big white house and has a brother and a sister just about your age. Scott is a bad brother, he likes to play but he is always a very naughty boy. He never does nice things for his brother and sister and they don't like him very much. They say Scott is a bad big brother."

Neutral - "The man you are going to see now is Scott. Scott lives in a big white house and has a brother and a sister just about your age. Scott has blue eyes and brown hair. He goes to school and drives his car home at night. After he eats dinner, Scott watches television and sometimes reads a book."

After the model was characterized for the S, the videotape presentation began. At the beginning of this tape presentation, the model was shown standing still. The experimenter remarked that this man was Scott. The tape then showed Scott enacting the sequence of aggressive and nonaggressive responses listed previously.

After the videotape production, S was invited to play in an adjoining room where a variety of toys were available that could be used in imitative or nonimitative responding. The imitative toys included: a broomstick with a horse's head, gun, Popeye doll, wooden mallet and Indian headdress. The nonimitative toys included: plastic farm animals, a tinker toy set, dish set, crayons and paper, rubber ball,

two dolls, cars and trucks, and a cowboy hat.

At this point, E, explaining to the child that she had something to do and would be just outside the door, left the child alone in the room for 15 minutes.

During this interval, S's behavior was rated by two judges who observed the child through a one-way mirror in the adjacent observation room. The child's behavior was classified into fixed response categories every five seconds during this time period. At the end of the rating session, E systematically questioned the child. Two of the questions assessed S's perception of the film model ("Was he a good(nice) or bad (naughty) boy?") and six questions evaluated S's understanding of the concepts of good and bad ("If you hit someone, are you good or bad?").

Response Measures

The behavior of each S was categorized as: Aggressive or nonaggressive; motor or verbal; imitative or nonimitative. If a response was imitative, it was further described with regard to the accuracy of imitation: complete or partial. Given these three major response categories, this classification system generated 12 response indices (see Table 1). In scoring the child's behavior, agreement between judges was high, with product moment correlation coefficients being in the .90s.

RESULTS

Three-way factorial analyses of variances (model

Characterization X Sex X Age) were conducted on each of the twelve response measures. The age factor resulted from dividing Ss into two groups, on the basis of whether they were above or below the median age of 54 months. The mean responses for male and female Ss in the three model characterization groups for each of the response indices are presented in Table 1[1].

Insert Table 1 about here

Analyses of the three indices of motor aggression (imitative, partially imitative and nonimitative) yielded a significant result only for the partial imitative response measure. For this index there was a characterization main effect ($F=4.44$, $df=2,45$, $p<.05$). Individual comparisons showed that the "good" characterization group displayed more partial imitative aggression ($\bar{X}=60.94$) than the neutral ($\bar{X}=28.92$; $F=8.43$, $df=1,53$, $p<.01$) and "bad" ($\bar{X}=37.08$; $F=4.05$, $df=1,53$, $p<.05$) groups. There was no significant difference between these latter two groups.

Considering the three verbal aggressive indices, males displayed more complete imitative responses than females ($F=4.13$, $df=1,45$, $p<.05$). No other main or interaction effects were found to be significant for this analysis or in the analyses of the partial imitative and the nonimitative verbal aggressive data.

Analysis of the three motor nonaggressive indices revealed a significant characterization X sex interaction ($F=3.96$, $df=2.45$, $p<.05$) for the complete imitative response

index. While males showed no significant differences in complete imitation under the various model characterization conditions, females within the good characterization group showed more complete imitative nonaggressive behavior than females in the neutral (F=5.00, df=1,51, $p < .05$) and bad (F=4.89, df=1,51, $p < .05$) groups. Moreover, females also showed more complete imitation than males when exposed to the "good" model (F=7.00, df=1,51, $p < .025$). No other significant main or interaction effects were found upon examination of the other motor nonaggressive indices. Analysis of the three verbal nonaggressive indices also yielded no significant results.

The relative frequencies of motor to verbal behavior within the aggressive and nonaggressive response categories were compared for all Ss. When the measures of complete, partial, and nonimitative responses were summed, 56 of the 57 Ss were found to have emitted more motor than verbal responses with both the aggressive and the nonaggressive categories.

Because of the extreme heterogeneity of variance that existed between the different response indices nonparamteric statistics were employed to compare the relative occurrences of aggressive to nonaggressive responses. In order to conduct these analyses, a simple judgment was made for each S concerning whether he had demonstrated more aggressive, or more nonaggressive responses. Considering first the motor response data, a sign test

revealed that significantly more Ss performed imitative (complete and partial combined) aggressive than imitative nonaggressive acts (43:13; $Z=3.87$, $p < .001$). In contrast, more Ss performed nonimitative nonaggressive than nonimitative aggressive responses (54:3; $Z=6.62$, $p < .001$). Model characterization and sex were not significant as effects analyses. When the imitative and nonimitative motor behavioral indices were simultaneously considered, model characterizations were found to differentially effect aggressive and nonaggressive behavior ($\chi^2 = 6.14$, $df = 2$, $p < 0.05$; See Table 2). Individual χ^2 analyses between the model characterization groups indicated that

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Insert Table 2 About Here

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only the good and neutral groups were significantly different from each other ($\chi^2 = 6.04$, $df = 1$, $p < 0.025$), with the good model group showing a higher proportion of aggressive behavior than the neutral model group. No sex or age effects were evident.

Nonparametric procedures were also applied in the analysis of the verbal response data. A sign test indicated that significantly more Ss (25:6) performed more imitative nonaggressive than imitative aggressive responses ($Z = 3.23$, $p < 0.001$). Model characterization and sex had no significant effect in either of these analyses. When both imitative and nonimitative responses,

were simultaneously considered, a sex effect was found (X^2 = 9.90, df = 2, p < 0.0005), reflecting the fact that 23 of 24 female Ss performed an equal or greater number of nonaggressive than aggressive responses, whereas, only 22 of the 33 male Ss responded in this fashion. The model characterization effect was not significant.

In analyzing Ss response to questions concerning his perceptions of the film model, a S was scored as reporting the model to be "good" or "bad". If the S response was either inarticulate or inconsistent, it was scored as neutral. The results are reported in Table 3. A X^2 analysis on this data revealed a significant model characterization effect (X^2=30.82, df=4, p <.001). Separate X^2 analyses indicated that the bad model characterization

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Insert Table 3 about here

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group was significantly different from the neutral group (X^2=28.43, df=2, p <.001) and the good group (X^2=23.20, df=2, p <.001) in their perception of the model. The good and neutral groups were not significantly different (X^2=5.25, df=2, p <.05) from each other.

DISCUSSION

In contrast to many other studies, the present research showed the model engaging in nonaggressive as well as aggressive behavior (motor and verbal). This allowed the children's imitative "preferences" for the four types of

behavior to be assessed. Generally, Ss were found to imitate with considerably greater frequency the model's aggressive motor responses in comparison to the model's nonaggressive motor responses. In contrast, there were no reliable differences in the frequency with which S imitated the model's aggressive and nonaggressive verbal behavior.

The data also revealed some other general trends children's imitative and nonimitative behavior. Virtually all Ss displayed more motor than verbal behavior. This pattern was consistent for both the aggressive and nonaggressive response categories. However, in contrast to Ss' motor imitative responses, which were more frequently aggressive, Ss' motor nonimitative responses were predominantly nonaggressive. Moreover, the children's verbal nonimitative responses were almost entirely nonaggressive. Thus, in general, children who were imitating were most frequently also aggressive, while children who were engaged in nonimitative behaviors were usually nonaggressive.

The Ss' high rate of emission of imitative aggressive response in this study could be related to their personal histories of reinforcement for this type of behavior. In contrast, the aggressive behavior of the model might be viewed as being a more effective elicitor or disinhibitor of matching responses in S than his nonaggressive behavior. In attempting to formulate an operational definition of aggression, Bandura and Walters (1963) concluded that ag-

gression was typically a high intensity response. Conversely, nonaggressive responses have been categorized generally as being of lower intensity. If this dichotomy is reliable, it is possible that the "high intensity" aggressive responses are more likely to be imitated because they are more salient ("attention-getting") than the "less intense", nonaggressive responses.

As anticipated, Ss in the"good" model characterization group engaged in aggressive responding (partially imitative) more frequently than Ss in the neutral and bad model characterization groups. However, contrary to expectation, Ss in the "bad" model group did not display less imitative aggression than Ss in the "neutral" characterization group. In addition, although not statistically significant, a higher proportion of Ss in the "bad" model than in the "neutral" model group were characterized as being dominantly aggressive in their behavior (See Table 2).

Luria's (1961) discussion of language and its controlling effects on behavior suggests an explanation for the absence of response inhibition in Ss in the "bad" model characterization condition. In analyzing the interrelation of language development and behavioral control, Luria suggests that for the younger child, speech can initiate behavior but usually cannot regulate or inhibit it. In contrast, he points out that for the older child, speech can both initiate and inhibit behavior. Although no differences were found in the present study in the imitation

patterns of younger and older Ss in the various model characterization conditions, the children were all of preschool age. Thus, consistent with Luria's contention it might be predicted that even though the bad model characterization did not inhibit the imitative behavior of the younger Ss in this study, such a description would inhibit the behavior of older children.

The correspondence that was obtained between S's model characterization and his post-experimental verbal evaluation of the model, suggested that the evaluative descriptions had their intended effects. That is, Ss in the "good" and "bad" characterization groups viewed the model respectively as "good" and "bad". In contrast, the "neutral" characterization Ss were not uniform in their evaluation of the model. Moreover, the post-experimental questioning procedures also indicated that the Ss understood the concepts of good and bad. Because Ss in the good instructional group viewed the model as good and imitated his aggressive behavior more, this points out that there is at least a strong correlation, if not a causal relationship in this group, between S's perception of the model and the frequency with which S chose to emulate that model. However, the fact that the "bad" and "neutral" model characterization groups' verbal evaluations of the model differed, but their imitation patterns were similar, suggests an imperfect correlation between language and performance. More specifically, the results indicated that

although Ss in the "bad" characterization group viewed the model as bad more often than Ss in the "neutral" group, they imitated the model's behavior with about equal frequency. Thus, the fact that S views the model as bad does not appear to reduce the probability of his imitating that model. This result would also seem to support Luria's contention that the "language" of a younger child does not inhibit his behavior.

In studies similar to this one, which also used a male model (e.g., Bandura, Ross and Ross, 1961), sex differences in aggressive behavior were frequently found with male Ss performing more physical and verbal aggressive acts than females. In contrast, in this study, male Ss displayed significantly more aggressive responses than female Ss for only one of the six indices of aggressive behavior, that being for complete imitative verbal aggression. The present study's failure to find the usual sex differences in aggression may be due to S sample differences. For example, Bandura selected his subjects from university preschools, whereas the children in this study were obtained from a middle class, but nonuniversity nursery.

In summary, considering the specific issue of the impact of observed model aggression on children's imitative behavior and the more general issue of television's influence on the youthful observers' behavior, this study makes four contributions. First, it suggests that children are more likely to display imitative motor aggression

when the model is described to them in positive terms. However, the converse does not seem to hold true. That is, Ss for whom the model was described in negative terms do not show a significant inhibition in their imitative responding. Second, it indicates that evaluative comments about the model do have a consistent and marked influence on how S evaluates a model. However, the results suggest an imperfect relationship between S's verbal evaluation of a model and the model's influence on S's imitative behavior. Third, the study points out that a model's aggressive responses have a higher probability of being imitated by S than a model's nonaggressive behavior. Fourth, it suggests that middle class preschool children are more likely to imitate motor in preference to verbal aggressive responses.

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FOOTNOTES

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[1]Tests for homogenity of variance for many of the response measures indicated heterogenity. For that reason all of the analyses of variance discussed were also calculated using the data transformation $y = \sqrt{x} + \sqrt{x + 1}$. The results from these analyses were virtually the same as those presented. For ease of interpretation, the results on the untransformed data are presented.

TABLE 1

Mean Aggression and Nonaggression Scores for Male and Female Ss in the Good, Neutral, and Bad Model Characterization Groups.

Motor and Verbal Aggressive Responses

S Group	Complete Imitative		Partial Imitative		Nonimitative	
	Motor	Verbal	Motor	Verbal	Motor	Verbal
Good Model						
Female n = 7	12.57	3.29	53.43	.57	2.14	.00
Male n = 10	19.40	11.10	67.30	.60	10.30	1.00
Neutral Model						
Female n = 9	8.33	3.22	29.67	.00	7.56	1.67
Male n = 11	10.18	3.91	25.27	.18	2.45	3.45
Bad Model						
Female n = 8	9.63	4.38	43.25	.25	8.63	.88
Male n = 12	17.00	7.00	30.92	2.42	10.67	2.33

Motor and Verbal Nonaggressive Responses

S Group	Complete Imitative		Partial Imitative		Nonimitative	
	Motor	Verbal	Motor	Verbal	Motor	Verbal
Good Model						
Female n = 7	9.86	1.29	8.86	.00	90.70	20.71
Male n = 10	2.40	1.20	33.80	.00	51.50	12.50
Neutral Model						
Female n = 9	3.56	2.00	8.56	.11	94.11	20.67
Male n = 11	3.45	.82	5.82	.09	99.00	18.73
Bad Model						
Female n = 8	3.63	1.75	6.50	.13	99.38	10.38
Male n = 12	6.08	3.42	32.08	.08	76.25	22.42

TABLE 2

Number of Ss in the Model Characterization Groups Displaying More Aggressive (>) and Less Aggressive (<) than Nonaggressive Responses

	Model Characterization Group		
	Good	Neutral	Bad
Aggr. > Non Aggr.	9	3	8
Aggr. < Non Aggr.	8	17	12

TABLE 3

Number of Ss in the Model Characterization Groups Evaluating the Model as Good, Neutral and Bad

S's Evaluation of Model	Model Characterization Group: Good	Neutral	Bad
Favorable	13	8	2
Neutral	3	7	1
Unfavorable	1	5	17